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Cust prior. Stem cell colony is on the left. Mouse fetal fibroblast feeder layer is on the right. Photograph shows differentiation of the cells at the edge of the stem cell colony.

In the Claims:

Please delete claim 2. ✓

Please amend the claims as follows:

1. (Amended) A method for producing pluripotent (ES) cells that can be used to produce differentiated cells and tissues comprising:

(a) obtaining an oocyte in metaphase II that comprises DNA derived from a single individual male or female mammal, which optionally may be genetically modified;

A13 (b) activating said [haploid cell] oocyte by a method selected from the group consisting of (1) conditions that do not result in second polar body extrusion; (2) conditions that provide for polar body extrusion but in the presence of an agent that inhibits polar body extrusion, and (3) conditions that prevent the initial cleavage, and culturing said activated oocyte to produce a gynogenetic or androgenetic embryo comprising a discernible trophectoderm and an inner cell mass;

(c) isolating said inner cell mass or cells therefrom and transferring said inner cell mass or cells to an *in vitro* media that inhibits differentiation of said inner cell mass derived therefrom; and

(d) culturing said inner cell mass cells or cells derived therefrom to maintain said cells in an undifferentiated pluripotent state.

A14 3. (Amended) The method of Claim 1, wherein the oocyte is a human, non-human primate, bovine, porcine, or ovine oocyte.

4. (Amended) The method of Claim 3, wherein the DNA is derived from a single individual selected from the group consisting of human, bovine, primate, ovine, or porcine.

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cut 5. (Amended) The method of Claim 4, wherein the oocyte is a human or bovine oocyte and the DNA is human DNA.

a15 9. (Amended) The method of Claim 1, wherein the DNA is derived from a single individual female mammal.

10. (Amended) The method of Claim 1, wherein the DNA is derived from a single individual male mammal.

11. (Amended) The method of Claim 1, wherein the oocyte comprises a human oocyte containing DNA derived from a single individual male or female human.

a16 13. (Amended) The method of Claim 1, further comprising implanting the pluripotent cells, or differentiated cells derived therefrom, at a desired site *in vivo* that is to be engrafted with cells or tissue.

14. (Amended) The method of claim 13, wherein the pluripotent cells, or differentiated cells derived therefrom, are implanted in an immunocompromised non-human animal.

Please add the following new claim(s):

39. (New) A method for producing pluripotent (ES) cells that can be used to produce differentiated cells and tissues comprising:

(a) preparing an embryo comprising DNA derived from a single individual male or female mammal;

a17 (b) isolating inner cell mass or cells therefrom and transferring said inner cell mass or cells to an *in vitro* media that inhibits differentiation of said inner cell mass derived therefrom; and

(c) culturing said inner cell mass cells or cells derived therefrom to maintain said cells in an undifferentiated, pluripotent state.

40. (New) The method of claim 39, wherein the preparing an embryo comprising DNA derived from a single individual male or female mammal comprises:

- (a) transferring a haploid cell, or haploid nucleus derived therefrom, to an enucleated blastomere to thereby form a nuclear transfer embryo; and
- (b) inhibiting the first cleavage of the nuclear transfer embryo.

41. (New) The method of claim 39, wherein the preparing an embryo comprising DNA derived from a single individual male or female mammal comprises transferring two haploid cells, or two haploid nuclei, to an enucleated blastomere.

42. (New) The method of claim 39, wherein the blastomere is a human, non-human primate, bovine, porcine, or ovine blastomere.

43. (New) The method of claim 39, wherein the DNA is derived from a single individual male or female mammal selected from the group consisting of a human, a primate, a bovine, a porcine, or an ovine.

44. (New) The method of claim 39, wherein the blastomere and the DNA are of the same species.

45. (New) The method of claim 39, wherein the DNA is derived from a single individual male mammal.

46. (New) The method of claim 39, wherein the DNA is derived from a single individual female mammal.

47. (New) The method of claim 39, wherein the DNA is genetically modified.

48. (New) The method of claim 39, further comprising culturing the pluripotent cells, whereby said pluripotent cells differentiate.